



Talk announcement

on Wednesday, 18th May 2022, 5:00 pm (seminar room 2D358)

Can primary nociceptive neurons “learn”?

Translational Pain Research

Pain Sensitization

Pain is one of the main reasons why medical advice is sought. Pain is initiated on the one hand by stimuli such as high temperature or strong pressure, and on the other hand by sensitization processes in the context of tissue changes. In the case of injuries, illnesses but also after operations, even light stimuli such as breathing, light movements or simply lying in bed can trigger pain. How this pain sensitization comes about and, above all, how it can be eliminated, is as yet insufficiently understood.

High Content Screening Microscopy

The analysis of intracellular signaling processes in neurons of the “pain system” has so far been very complex and of low detail. Tim Hucho's laboratory was the first in the pain field to optimize and apply "High Content Screening Microscopy" for this purpose. Through the complete digital acquisition of neuronal cell cultures followed by a software-based image analysis of these extremely large data sets, they are able to analyze the signaling processes in individual cells with high sensitivity and detail. In particular, this allows them to investigate different substances and mechanisms for synergistic or antagonistic mechanisms of action in the context of nociception.

Text adapted from: <https://anaesthesie.uk-koeln.de/forschung/translationale-schmerzforschung/>

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